

Based on the above, it appears that the 1974 data were collected at a time when many females had already laid clutches that were being attended by males and some females were in the process of laying additional clutches in response to plentiful food. The preceding speculation is especially likely as it was found previously that laying usually begins in late April and females are capable of producing clutches 11 to 13 days apart (based on two cases).

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**Cape May Warblers in Middle America.**—The paucity of records for the Cape May Warbler (*Dendroica tigrina*) in the bird literature of Middle America and recent sightings of this species led me to delve into the records. The A.O.U. check-list (1957: 490) gives the winter range as the West Indies, casually to Tobago, Yucatan, and Quintana Roo in Mexico, Cayo Norte, Turneffe, Bay Islands of Honduras, and Old Providence. In general the Cape May Warbler is listed as a casual from Mexico to Panama. Let us examine the records from north to south in this region.

*Mexico.*—In the "Distributional check-list of the birds of Mexico" (Miller et al. 1957: 247) are three records from the Yucatan Peninsula in 1955, given in more detail by Paynter (1955: 248). Peterson and Chalif (1973) reported no further records, but a letter received in 1974 from Allan Phillips tells me he collected one of three or more birds that were flycatching from utility wires near San Miguel, Cozumel, Quintana Roo, on 12 November 1965. Binford (1973) reported a specimen at San Cristóbal de las Casas, Chiapas, 25 April 1972. Peter Alden (in litt. to Eisenmann) reported he saw and photographed a male at Xicotepec, Puebla in February or March 1968.

*British Honduras.*—Russell (1964: 153) mentions a specimen in the University of Michigan Museum of Zoology collected from "several seen in bunch" 7 April 1931 and repeats Bond's (1954) record of a specimen taken 23 January 1954 at Rendezvous Point. A Florida Audubon Tour party led by Russ Mason, Nina Steffee, and Dora Weyer saw a single male at Half Moon Cay 4 February 1968.

*Guatemala.*—This species is not mentioned in Land's "Birds of Guatemala" (1970) nor in earlier publications on the birds of that country. In February 1974 a natural history tour party of 23, led by Russ Mason and Doris Mager, found Cape May Warblers on four successive days. On 11 February we saw a single male in a wooded edge along the road between Guatemala City and Chulimar. From 12–14 February at least three or four males were seen daily in a bottlebrush tree in the enclosed garden of the former Casa Contenta Hotel, now a government rest house at Panajachel on Lake Atitlán. Referring to earlier records of a similar trip, I discovered we had listed up to three male Cape May Warblers in exactly the same place on 8, 9, and 10 February 1970 on a tour led by Russ Mason and Nina Steffee. Alden (in litt.) reported to Eisenmann that he saw one at Panajachel in January 1970. Alden (pers. comm. 1974) stated he has plenty of pictures of many Cape May Warblers all around Lake Atitlán in February and March "every year." He considers them common in that section. Yet annual Florida Audubon Tours from

1959 to 1973 revealed no Cape May Warblers except in the two years mentioned, though the tour parties stayed at Casa Contenta each year.

*El Salvador*.—Rand and Traylor (1954) make no mention of Cape May Warblers, but a Florida Audubon Tour party found one at Lake Ilopango 29 March 1965 and another at Quiriguá 1 April.

*Honduras*.—Monroe (1968) reports the Cape May Warbler as a rare migrant in islands off the north coast with three specimen records—one undated, the other two in March 1912 and March 1948. He lists two other published records, 1888 and 1956.

*Nicaragua*.—Howell (1958) reported the first specimen of the Cape May Warbler from Nicaragua, and the only one to date.

*Costa Rica*.—Slud (1964) reported Cape May Warblers in Costa Rica on two occasions, two birds on the Pacific coast in late November and six birds on the Caribbean coast in December of another year. Mrs. G. Harrington (in litt. to Eisenmann) saw a male Cape May Warbler in her backyard in San José on 25 February and 1, 2, 3, 4, 8, 10, and 11 March 1965, and her son saw it twice the following week when she was away. On 19 February 1974 Jack Satterly, geologist and birder of Toronto, and I saw a male in a ruined church garden in central Cartago. Skutch (1967) reported one male on 9 May 1964 at Las Cruces, a highland locality in southwestern Costa Rica.

*Panama*.—The only pertinent paper mentioning the Cape May Warbler is Eisenmann and Loftin's field checklist "Birds of the western Chiriquí highlands, Panama." The statement made, "No Panama spec.; few sightings, one Chiriquí," was based on the following: Wetmore saw one in February 1958 at Almirante and Eisenmann spotted a male at Changuinola 7 December 1972, both locales in western Bocas del Toro. In the western Chiriquí highlands near El Hato, P. Alden saw two males in late January 1970 and R. S. Ridgely saw one 15 January 1974. The only central Panama observation was of a male on 2 February 1973 at Summit Gardens, Canal Zone during a Massachusetts Audubon bird tour, seen by E. Eisenmann, C. Leahy, and R. S. Ridgely, among others.

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These records suggest that the Cape May Warbler is an infrequent winter visitor or winter resident in much of Middle America and that its status may have changed in the past two decades.

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**Morphology of the bony stapes in *Philepitta* and *Neodrepanis*: New evidence for suboscine affinities.**—Two species of asities (*Philepitta*) and two of false sunbirds (*Neodrepanis*) are the only members of the family Philepittidae of Madagascar. The asities are small, plump birds that vaguely resemble the pittas, but are entirely arboreal. The false sunbirds, on the other hand, so closely resemble the true African sunbirds (with their long decurved beaks and metallic gloss) that they were classified as members of the true sunbird family, Nectariniidae, until Amadon in 1951 (Oiseau Rev. Franc. Ornithol. 21: 59) showed that *Neodrepanis* was not an oscine on the basis of the syringeal musculature, but closely allied to *Philepitta*. Ames (1971, Peabody Mus. Nat. Hist. Bull. 37) confirmed these findings, stating that (p. 153), "The syringeal structure of both *Philepitta* and *Neodrepanis* is remarkably like that of the broadbills *Smithornis* and *Psarismomus* . . ., even to minute details of the cartilaginous elements, but the whole organ is relatively unspecialized." He further states, "Whatever their affinities, the Philepittidae appear to have retained a primitive syrinx while most other passerines have evolved some modifications for song." Ames (op. cit.) suggested that the very simple nature of the syrinx of *Pitta* provides little evidence for affinities of the Pittidae.

Thus the Philepittidae have been considered suboscine on the basis of retained primitive characters of the syringeal musculature, rather than on the basis of shared derived characters. This paper presents evidence from the morphology of the bony stapes providing the first derived character to illustrate the suboscine affinities of *Philepitta* and *Neodrepanis*.

I have recently examined the morphology of the bony stapes in more than 1000 avian species and have discovered that while the oscine passerines have retained a morphology of the stapes resembling the primitive condition, with the flat footplate, the suboscines possess a derived morphology characterized by the presence of a large bulbous footplate area perforated by one (often one large and small) fenestra (Feduccia 1974, Auk 91: 427). In my previous paper (Feduccia op. cit.) I argued that this derived morphology was strong evidence for common ancestry